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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,687	07/16/2004	Renatus Josephus Van Der Vleuten	NL020028	2755

24738 7590 12/11/2006

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EXAMINER

MOON, SEOKYUN

ART UNIT PAPER NUMBER

2629

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,687

Applicant(s)

VAN DER VLEUTEN ET AL.

Examiner

Seokyun Moon

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. The Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

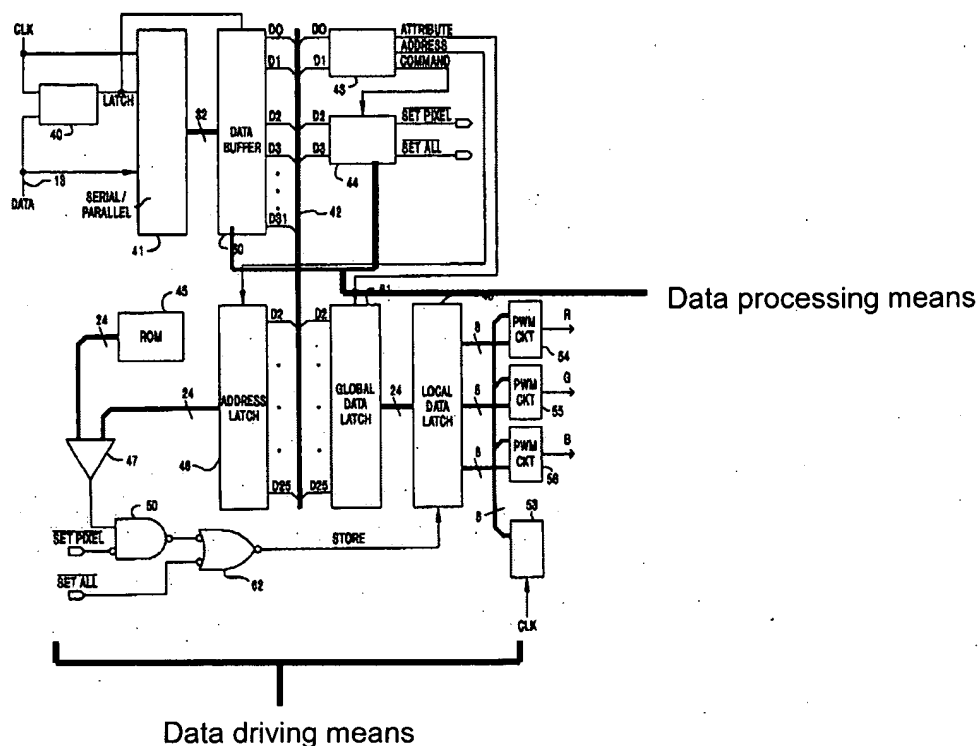
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan et al. (US 6,061,039, herein after "*Ryan*") in view of Wolfgang et al. (DE 19950839, herein after "*Wolfgang*").

As to **claim 1**, Ryan teaches

a display device [col. 2 lines 64-65] comprising a substrate ("*substrate 14*") [fig. 2], the substrate is provided with groups of pixels ("*circuit elements 12*") [col. 3 lines 58-59], wherein each group of pixels is within a separate defined area on the substrate [figs. 1 and 2]; and

a plurality of semiconductor devices (the processors or memory included in "*logic circuits 11*") [figs. 2 and 9], wherein each semiconductor device is mainly associated with a different pixel, and wherein each semiconductor device is positioned within the defined area of the pixel that is mainly associated with [fig. 1], the semiconductor device being provided with drive means for driving pixels dependent on data to be displayed and with data processing means [drawing 1 provided on page 3 of this Office Action, which is equivalent to Ryan's fig. 9].



Drawing 1

Ryan does not teach each of the semiconductor devices to be associated with a group of pixels.

However, Wolfgang [abstract and fig. 3] teaches a display device comprising a plurality of control circuits and an array of display elements, wherein each of the control circuits is associated with a sub-array of display elements.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ryan's display device to associate each of the semiconductor devices with a group of pixels rather than a single pixel, as taught by Wolfgang, in order to reduce the number of semiconductor devices required to drive the display, thus to reduce the manufacturing cost for the display device, when the display device is used for a large display, wherein a plurality of pixels included in the large display are driven with same data.

As to **claim 2**, Ryan [fig. 9] teaches the semiconductor devices being provided with means ("*ROM 45*") for recognizing the location of the group of pixels [col. 7 lines 59-60].

As to **claim 3**, Ryan teaches the data processing means to have a decoding function [col. 9 lines 58-59].

As to **claim 4**, Ryan teaches the addressing rate of the semiconductor devices being variable [col. 6 line 59 - col. 7 line 6].

As to **claim 5**, Ryan teaches that the drive means for different parts of the display have separate control means (a combination of "*comparator 47*", "*50*", and "*address latch 46*") for varying the addressing rate of the associated semiconductor devices [col. 6 line 59 - col. 7 line 6].

As to **claim 6**, Ryan teaches the driving means to comprise a frame memory ("*global data latch 61*") [col. 8 lines 15-18] and means ("*decoder 43*") [fig. 9] to detect changes between the contents ("*D0 – Dn*") of the subsequent frames.

As to **claim 7**, all of the claim limitations have already been discussed with respect to the rejection of claim 6.

As to **claim 8**, Ryan teaches that encoded data to be displayed is transported to at least a group of the semiconductor devices (the processors and memory included in "*logic circuit 11*") after detecting a certain amount of change between the contents of subsequent frames or of subsequent sub-frames (after the "*decoder 43*" determines the type of the command to output depending on the input "*D0*" and "*D1*") [col. 6 lines 10-17].

As to **claim 9**, Ryan [fig. 9] teaches encoded data to be displayed being transported to at least a part of the group of the semiconductor devices at full frame rate ("*a single data transfer cycle*") [col. 3 lines 11-14].

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As to **claims 10 and 11**, Ryan teaches at least a part of the group of the semiconductor device to receive the most significant part ("*Dn*") of the data and refinement part ("*D2*") of the data to be displayed [col. 7 lines 51-57].

As to **claim 12**, Ryan teaches the driving means for the display to comprise an encoding function [col. 10 lines 13-15].

As to **claims 13 and 14**, Ryan teaches the means for recognizing the location to have a read-only structure ("*ROM 45*") [col. 7 lines 59-60].

As to **claim 15**, Ryan [fig. 9] teaches the drive means to have a bus structure ("*common bus structure 13*").

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 5, 2006

S.M.

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", with a large, sweeping flourish at the end.